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APPLICATION NO.	FILING DATE	FIRST-NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,097	09/23/2003	William E. Lawton	32250	1842

7590 11/01/2006

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EXAMINER

SHAN, APRIL YING

ART UNIT PAPER NUMBER

2135

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/669,097	Applicant(s) LAWTON ET AL.	
	Examiner April Y. Shan	Art Unit 2135	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-10 have been examined.

Priority

2. Examiner is aware that this application claims benefit of 60/413,388 filed on 25 September 25, 2002.

Specification

3. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

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4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Method for remote setting of an encryption key for logical network separation.

5. On page 1 of the specification, Applicant indicated "the HomePlug 1.01 Specification of the HomePlug Power Alliance, incorporated here by reference". First, the examiner noticed that the Applicant did not provide a copy of this reference to the office. Second, the Applicant cannot incorporate NPL reference into incorporated by reference. Please see 37 CFR 1.56, 1.57 and MPEP 201.17 for incorporation by reference. Therefore, the examiner will not consider "the HomePlug 1.01 Specification of the HomePlug Power Alliance" as incorporation by reference.

6. The disclosure is objected to because of the following informalities:

a. The definition of SetNek on page 3-4 in the specification is not clear and grammatically incomprehensible. For example, "its defined behavior....to that found in the MME". What is "that" referring to? Please redefine. In order to further exam on the merits on the claims, the examiner assumes it is a request.

Appropriate correction is required.

Claim Objections

7. Claims 1-10 are objected to because of the following informalities:

For example,

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- a. "DEK" in line 2, claim 1 should be "Device Encryption Key";
- b. "NEK" in line 5, claim 1 should be "Network Encryption Key";

Any claim not specifically addressed, above, is being objected as incorporating the deficiencies of a claim upon which it depends.

Please check the claims 1-10 and correct any informality the Applicant is aware of.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Yonge, III (U.S. Patent 6,987,770)

As per **claim 1**, Yonge, III discloses a method for determining MAC address for a remote device having a known, unique DEK in a network where devices may not send a confirmation to a SetNEK request, the method comprising the steps of:

preparing a broadcast message with a SetNEK request containing a unique, temporary NEK (col. 33, lines 38-45);

encrypting the message with the DEK of the remote device ("The master station encrypts the frame using the received default key" – e.g. col. 33, lines 44-45 and step 594 in fig. 30);

transmitting the broadcast message ("transmits the encrypted frame to the new station..." – e.g. col. 33, lines 45-50, fig. 29 and step 596 in fig. 30) on a network medium (e.g. transmission medium 14 in fig. 3);

confirming receipt of the temporary NEK by sending a request that requires a response from the remote device which is encrypted with the temporary NEK (col. 33, lines 51-59); and

determining the MAC address of the remote device from the response ("In response to these inputs, it provides...new station address" –e.g. col. 26, lines 44-61 and "upon receipt of this response, the master station utilizes the channel map specified in the response to send the encrypted frame (containing the NEK) to the new station" –e.g. col. 33, lines 59-61).

As per **claim 2**, Yonge, III discloses a method as applied in claim 1. Yonge, III further discloses wherein the remote device is not a member of a network (new station 12e in fig. 29 and col. 33, lines 1-12 and 33-34).

As per **claim 3**, Yonge, III discloses a method as applied in claim 2.

Yonge, III further discloses comprising the step of using the MAC address of the remote device in a unicast transmission to reliably confirm receipt of the temporary NEK (col. 11, line 43).

As per **claim 4**, Yonge, III discloses a method as applied in claim 3.

Yonge, III further discloses comprising the step of using the MAC address of the remote device in a unicast transmission ("unicast transmission"- e.g. col. 10, lines 39-40) containing a SetNEK message with the local NEK (col. 34, lines 11-26).

As per **claim 5**, Yonge, III discloses a method as applied in claim 4.

Yonge, III further discloses comprising the step of using the MAC address of the remote device in an additional unicast transmission which is encrypted with the local NEK, for purposes of confirming receipt of the local NEK (col. 11, line 43).

As per **claim 6**, Yonge, III discloses a method as applied in claim 2.

Yonge, III further discloses using the determined MAC address to reliably send the local NEK (col. 33, lines 59-62); preparing a unicast message to the remote device containing a SetNEK request where the SetNEK request contains a unique, temporary NEK (col. 33, lines 38-45); encrypting the unicast message with the DEK of the remote device ("The master station encrypts the frame using the received default key" – e.g. col. 33, lines 44-45 and step 594 in fig. 30);

transmitting the unicast message on the medium ("transmits the encrypted frame to the new station..." – e.g. col. 33, lines 45-50, fig. 29 and step 596 in fig. 30); and confirming receipt of the temporary NEK by sending a request that requires a response which is encrypted with the temporary NEK (col. 33, lines 51-59).

As per **claim 7**, Yonge, III discloses a method as applied in claim 1. Yonge, III further discloses wherein the network is a powerline network (col. 6, lines 22-24 and fig. 1).

As per **claim 8**, Yonge, III discloses a method as applied in claim 1. Yonge, III further discloses wherein the remote devices are implemented according to the HomePlug Powerline Alliance standard (on page 3, Yonge, III cited "HomePlug Powerline Alliance, HomePlug 1.0.1 Specification, Dec. 1, 2001).

As per **claim 9**, Yonge, III discloses a method as applied in claim 1. Yonge, III further discloses wherein the request is a request statistics MME and the response is a statistic response MME (col. 15, Table 2 "Request parameters and statistics" and "Parameters and Statistics Response" and col. 18, lines 65-col. 19, line 3).

As per **claim 10**, Yonge, III discloses a method as applied in claim 1.

Yonge, III further discloses wherein the request is a request channel estimation MME and the response is a channel estimation response (col. 33, lines 55-59).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Gardner (U.S. Patent 6,854,059) discloses an inventive MAC protocol for powerline networking system.
- Raphaeli et al. (U.S. Pub No. 2003/0103521) discloses a novel and useful media access control protocol that is intended for use over noisy shared media channels.
- Yonge, III et al. (U.S. Patent 6,909,723) discloses a scheme for bounding latency of transmissions for QoS in network stations operating in shared medium access network.
- Yonge, III et al. (U.S. Patent 6,907,044) discloses a CSMA MAC scheme for supporting both centralized and distributed shared medium access control in a CSMA network.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to April Y. Shan whose telephone number is (571) 270-1014. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AYS

26 October 2006
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